AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1   1. (Currently amended) A method to facilitate debugging a platform-
2   independent virtual machine, comprising:
3   providing an agent on the platform-independent virtual machine, wherein
4   the agent provides a set of functions for accessing a plurality of variables in the
5   platform-independent virtual machine and wherein the agent is limited to
6   gathering a current state of variables within the platform-independent virtual
7   machine, whereby limiting the agent to gathering the current state of variables
8   within the platform-independent virtual machine allows the method to operate on
9   a system with limited memory;
10   adapting the platform-independent virtual machine to call the set of
11   functions within the agent;
12   examining a current state of the plurality of variables in the platform-
13   independent virtual machine using the agent; and
14   communicating the current state of the plurality of variables to a host
15   machine, wherein an operator of the host machine can analyze the current state of
16   the plurality of variables to determine if the platform-independent virtual machine
17   is operating correctly and, if not, to determine a possible cause of incorrect
18   operation.

1   2. (Original) The method of claim 1, wherein the agent includes a core

2   portion that is common across multiple platforms and a platform-specific portion

3   for each platform.

1   3. (Original) The method of claim 2, wherein the platform-specific portion

2   includes features and structures related to a specific platform-independent virtual

3   machine.

1   4. (Original) The method of claim 1, wherein adapting the platform-

2   independent virtual machine to call the set of functions within the agent involves

3   inserting checkpoints within executable code for the platform-independent virtual

4   machine.

1   5. (Original) The method of claim 4, wherein a checkpoint uses the set of

2   functions to examine the current state of the plurality of variables and

3   communicate the current state of the plurality of variables to the host machine.

1   6. (Original) The method of claim 1, wherein communicating the current

2   state of the plurality of variables to the host machine involves using one of a direct

3   coupling and a network coupling.

1   7. (Original) The method of claim 1, wherein the agent only includes

2   resources for collecting data, thereby limiting memory usage of the agent.

1   8. (Currently amended) A computer-readable storage medium storing

2   instructions that when executed by a computer cause the computer to perform a

3   method to facilitate debugging of a platform-independent virtual machine, the

4   method comprising:

3

5   providing an agent on the platform-independent virtual machine, wherein

6   the agent provides a set of functions for accessing a plurality of variables in the

7   platform-independent virtual machine and wherein the agent is limited to

8   gathering a current state of variables within the platform-independent virtual

9   machine, whereby limiting the agent to gathering the current state of variables

10   within the platform-independent virtual machine allows the method to operate on

11   a system with limited memory;

12   adapting the platform-independent virtual machine to call the set of

13   functions within the agent;

14   examining a current state of the plurality of variables in the platform-

15   independent virtual machine using the agent; and

16   communicating the current state of the plurality of variables to a host

17   machine, wherein an operator of the host machine can analyze the current state of

18   the plurality of variables to determine if the platform-independent virtual machine

19   is operating correctly and, if not, to determine a possible cause of incorrect

20   operation.

1   9. (Original) The computer-readable storage medium of claim 8, wherein

2   the agent includes a core portion that is common across multiple platforms and a

3   platform-specific portion for each platform.

1   10. (Original) The computer-readable storage medium of claim 9, wherein

2   the platform-specific portion includes features and structures related to a specific

3   platform-independent virtual machine.

1   11. (Original) The computer-readable storage medium of claim 8, wherein

2   adapting the platform-independent virtual machine to call the set of functions

3   within the agent involves inserting checkpoints within executable code for the

4   platform-independent virtual machine.

1   12. (Original) The computer-readable storage medium of claim 11,

2   wherein a checkpoint uses the set of functions to examine the current state of the

3   plurality of variables and communicate the current state of the plurality of

4   variables to the host machine.

1   13. (Original) The computer-readable storage medium of claim 8, wherein

2   communicating the current state of the plurality of variables to the host machine

3   involves using one of a direct coupling and a network coupling.

1   14. (Original) The computer-readable storage medium of claim 8, wherein

2   the agent only includes resources for collecting data, thereby limiting memory

3   usage of the agent.

1   15. (Currently amended) An apparatus that facilitates debugging of a

2   platform-independent virtual machine, comprising:

3   a providing mechanism that is configured to provide an agent on the

4   platform-independent virtual machine, wherein the agent provides a set of

5   functions for accessing a plurality of variables in the platform-independent virtual

6   machine and wherein the agent is limited to gathering a current state of variables

7   within the platform-independent virtual machine, whereby limiting the agent to

8   gathering the current state of variables within the platform-independent virtual

9   machine allows the mechanism to operate on a system with limited memory;

10   an adapting mechanism that is configured to adapt the platform-

11   independent virtual machine to call the set of functions within the agent;

12   an examining mechanism that is configured to examine a current state of

13   the plurality of variables in the platform-independent virtual machine using the

14   agent; and

15   a communicating mechanism that is configured to communicate the

16   current state of the plurality of variables to a host machine, wherein an operator of

17   the host machine can analyze the current state of the plurality of variables to

18   determine if the platform-independent virtual machine is operating correctly and,

19   if not, to determine a possible cause of incorrect operation.

1   16. (Original) The apparatus of claim 15, wherein the agent includes a core

2   portion that is common across multiple platforms and a platform-specific portion

3   for each platform.

1   17. (Original) The apparatus of claim 16, wherein the platform-specific

2   portion includes features and structures related to a specific platform-independent

3   virtual machine.

1   18. (Original) The apparatus of claim 15, further comprising an inserting

2   mechanism that is configured to insert checkpoints within executable code for the

3   platform-independent virtual machine.

1   19. (Original) The apparatus of claim 18, wherein a checkpoint uses the set

2   of functions to examine the current state of the plurality of variables and

3   communicate the current state of the plurality of variables to the host machine.

1   20. (Original) The apparatus of claim 15, wherein communicating the

2   current state of the plurality of variables to the host machine involves using one of

3   a direct coupling and a network coupling.

1   21. (Original) The apparatus of claim 15, wherein the agent only includes

2   resources for collecting data, thereby limiting memory usage of the agent.